Africa's Petroleum Industry
A paper presented to the National Defense University's symposium
"Africa: Vital to US Security?"
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Summary. Sub-Saharan Africa, particularly West and Central Africa, has become a strategic supplier to the global and US oil and gas market. Africa's importance to US energy security is rising due to Africa's expanding role as an incremental supplier of oil in a tight global oil market, its relative openness to foreign investment, increasing levels of US investment in crude oil and LNG production, the quality of Africa's crude oil, and its proximity to the US market. Africa's expanding role as an energy supplier poses serious risks and great opportunities for its citizens. Rising wealth strains the ability of governments with historically weak capacity for governance to manage the wealth responsibly and to resist the competition for access to that wealth by existing elites. Rising production increases the competition among nations for political influence in Africa, reducing the leverage and importance of international financial institutions and some countries to promote improved governance. Today the primary threats to Africa's energy infrastructure and production are internal—from theft by organized crime groups, attacks from alienated populations living in producing areas and coup attempts fostered by competing internal elites. Terrorism and external adventurism are serious potential risks—none of the producing countries have the ability to detect and deter attacks on infrastructure. Africa's security vulnerability needs to be addressed, but as part of a broad based effort to improve the capacity of its governments for governance.[1] The US government, other governments, and international financial institutions can best enhance global energy security by fostering Africa's political development and social stability. Any effective strategy requires money, patience and sustained attention, a combination the United States and its partners have so far reliably failed to muster.

Africa's Importance to US and Global Energy Markets. West and Central Africa are increasingly important to the global oil market. Since 1998 when OPEC adopted a policy of restraining production to increase oil prices it has largely been non-OPEC suppliers that have met rising demand. One in five new barrels of oil that will enter the global market between 2005 and 2010 will come from the Gulf of Guinea. Within OPEC Nigeria was one of the most aggressive members in welcoming investment to increase productive capacity while other OPEC members delayed investment in capacity. In this environment, it is incremental oil suppliers that exert downward pressure on prices, counteract OPEC power, and enhance US energy security.

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[1] This paper draws on three of the author's previous works on African energy: Goldwyn and Morrison, "A Strategic Approach to Governance and Security in the Gulf of Guinea: A Report of the CSIS Task Force on Gulf of Guinea Security" (CSIS: July 2005); Goldwyn and Ebel, "Crafting a US Energy Policy for Africa" in *Rising US Stakes in Africa: a Report of the Africa Policy Advisory Panel* (CSIS: May 2004) and Goldwyn and Morrison, "Promoting Transparency in the African Oil Sector: A Report of the CSIS Task Force on Rising US Energy Stakes in Africa" (CSIS: March 2004).

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Africa contributes to the global supply of growth because it attracts foreign investment and has been stable enough to allow production to expand. The region will enjoy over $33 billion in onshore and offshore capital investment from 2005-2010, more than 40% of which will come from American companies. These new supplies will come from deepwater production in Nigeria, Angola, and Equatorial Guinea.

West Africa is projected to add between 2 and 3 million b/d to global oil supply by 2010. It will be strategic due not only to the volume of US investment, its 14% share of US imports, and the US citizens who help explore and produce those volumes, but to the fact that the Gulf of Guinea countries produce a high percentage of light, sweet crudes that are highly valued by the US market, and which are a relatively short distance from the United States. Gulf of Guinea producers are also of key importance to Europe and now to Asia, which seeks to balance its own dependence on Middle East crude oil with imports from Africa.

Africa currently supplies nearly 15 percent of all US oil imports. In ten years, if the region remains attractive for investment, West and Central Africa could supply up to 20 percent of US imported oil, further bolstering US energy security. These countries will not replace Middle East oil. But they will provide ample volumes of new non-Gulf barrels that will greatly influence world prices. This makes the subcontinent a key component of the diversity of US oil supply. Nigeria and Angola are the most important suppliers, together they supply 8.25 percent of total US imports and 4.76 percent of total US oil supply.[2] Equatorial Guinea and Chad are growing in importance as new production comes on line. Gabon's production is declining. Sao Tome and Principe may become an important supplier, but exploration programs are at very early stages.

While African oil is important, is it really strategic? I would argue that Africa is strategic for two reasons. One is that its importance as an incremental supplier is greater is than its share of world supply suggests: the region will add 2-3 million bpd of oil to the global market in the next five years. This will represent fully 20 percent of new worldwide production capacity. Second, it is one of the few places where international oil companies retain access for exploration of large reserves of oil. The world's oil supply has long been dominated by national oil companies. In recent years, areas once open to foreign investment have increasingly come under state control. Russia—the source of the greatest increase in supply growth since 1998—is increasingly closed to foreign investors as it effectively renationalizes its oil sector and prohibits foreign ownership of controlling interest. Russia's production has plateaued since this renationalization movement began. Despite record high oil prices, OPEC plans to curb production early next winter to prevent prices from declining in response to slowing global oil demand. In this environment, Africa's oil reserves, and the willingness of non-OPEC nations to continue to encourage foreign investment makes Africa a strategic player in the global oil market and key component of US energy security.

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[2] In 2002, the United States imported 332 thousand bpd from Angola and 621 thousand bpd from Nigeria. US total imports in 2002 amounted to 11,530 thousand bpd. Total US demand in the 1st quarter of 2003 was 20 million bpd.

Africa is an Important Destination for US Energy Investment. US energy investment in West and Central Africa, particularly in Nigeria and Angola, has been on the rise for several years. International oil companies have committed $30-$40 billion in investment during this decade alone.[3] Nearly all of this investment is to develop deep offshore oil and gas fields. According to PFC Energy, US companies' investment in Nigeria and Angola totaled $1.8 billion in 2003, while European companies' investment totaled $3.5 billion.

Africa has been able to attract investment despite civil war, unrest, and great internal instability for several reasons. The first is access. Nigeria, Angola, Equatorial Guinea and Chad offer international oil companies willing to risk their money in oil and gas exploration share ownership of the hydrocarbons they produce. This differs from Saudi Arabia, Kuwait, and Mexico, which do not permit foreign ownership of oil resources.

A second factor is an attractive investment framework. African oil producing nations have offered packages of taxes, royalties, and other fiscal terms that enable international oil companies (IOCs) to earn, on average, a 15 percent rate of return on their investment.[4]

A third reason is the predominance of new, offshore discoveries in West and Central Africa. Deepwater drilling is exorbitantly expensive and risky, restricting development to a handful of companies with the technology and financial wherewithal to manage the exploration risks. Offshore drilling also partly mitigates political risk by enabling the operator to conduct business miles from the host country's mainland. Nigeria's onshore development is aging, while all new discoveries and production are offshore. Angola's oil and gas reserves are predominantly offshore. As long as fiscal terms remain attractive, major oil companies are likely to sustain or expand investment in these countries.

Is African Energy Growth Sustainable? US energy and economic security interests will benefit if Nigeria and Angola remain stable suppliers of oil to the global market. Companies will only invest where political and operating risks are tolerable. In the short term, internal instability in Nigeria poses risks to its ability to sustain investment. In Angola, Equatorial Guinea and Chad, instability is a longer term risk. If popular expectations for benefits from rising energy wealth are not satisfied, history suggests that internal unrest and targeting of oil infrastructure may follow.

Conflict in the Niger Delta poses a serious threat to Nigeria's stability, and indeed viability, as an oil producer. The human costs of the conflict are significant and well documented. Foreign workers have been held hostage, and sabotage of oil pipelines has killed hundreds of Nigerians. The economic disruptions have been dramatic as well. A major strike in March 2003 knocked 800,000 barrels of oil per day off the market, adding

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[3] PFC Energy, *West Africa Petroleum Sector Oil Value Forecast and Distribution*, December 12, 2003, Section on Angola p.11 and section on Nigeria p. 11.

[4] Angola's new petroleum legislation may provide less generous returns, commensurate with declining geological risk. Whether this new framework is competitive will depend on the fields open for bid, world oil prices, and other fiscal terms.

pressure to already high oil prices. Production was curtailed for months for security reasons; as of early 2004, more than 200,000 barrels per day remain shut-in by violent internal action. Labor unions, accurately foreseeing the reduction in personnel needed to maintain offshore oil operations, are also threatening to shut down operations. No less alarming, armed ethnic militias, acting in concert with criminal syndicates, steal anywhere from 50,000 to 200,000 barrels per day in the Niger Delta (reports vary widely) and are able to defy the power of the Nigerian military, illicitly supply regional refineries, and thereby undermine regional stability. Poor governance combined with simmering ethnic tension puts the ability of the oil companies to operate onshore in Nigeria at risk.

Equatorial Guinea has faced at least two serious coup attempts. Analysts attribute one attempt to foreign adventurism and the other to competition for increased access to oil rents from inside the Obiang clan. There is widespread disaffection with the distribution of oil revenues in Angola and Chad, but so far this has not translated into attacks on oil installations or oil workers. A change in this security profile could result in a shut in of production, or the willingness of companies to sustain current levels of investment.

<u>What Are the Consequences of Rising Oil Wealth for Africa?</u> Rising oil wealth poses both challenges and opportunities for African nations. As oil production rises and captures world prices far higher than ever anticipated, each of these states, to varying degrees, will see a massive inflow of cash earnings. In 2003, analysis by PFC Energy, commissioned by CSIS, projected that Nigeria was to take in more than $100 billion in government earnings between then and 2010, based on $28 per barrel. That estimate today is far higher, given the rise in the global price of oil. Angola, in that same PFC analysis, was estimated to take in more than $40 billion. These historic windfalls may create cushions, or shock absorbers, that help facilitate reform. The impact of these revenues on per capita income in smaller nations such as Equatorial Guinea, are dramatic. In larger countries such as Nigeria and Angola, the per capita impact is smaller, but in combination with debt relief these flows could have a major impact on infrastructure development, education or health if spent wisely.

The downside risks of new wealth are significant and well documented. Oil wealth will also raise popular expectations, intensify internal debate on the lack of progress in alleviating poverty, potentially rapidly skew incentives away from reform, and lessen external influence. In the short term, there is a window for concerted engagement by the outside world on a reform agenda with these fragile, energy-rich transitional states. A quick survey of the key nations suggests that nascent reform efforts are under way in Nigeria, Angola and Equatorial Guinea, with Chad's efforts at revenue management now in some crisis over the government's desire to spend rather than save the funds reserved for future generations. If they are recognized and nurtured by the international community, they may succeed. If they are ignored, internal pressures could lead them to fail.

<u>What are the Major Threats to Africa's Energy Infrastructure?</u> The major threat to energy infrastructure in Africa today is internal crime, not terrorism or external adventurism. This could change. Africa's near total lack of customs, coast guard and riverine

interdiction capability make it a soft target for crime and adventure. Terrorism is not yet a threat in any of the sub-Saharan energy producers except for Nigeria. Concern is concentrated in Nigeria's northern region. Some analysts fear that indigenous terrorist groups, abetted by radical Islamist groups following Usama Bin Laden's exhortation in early 2003 to focus upon Nigeria, might seek to exploit rising discontent with the government in Abuja and its close ties with the West. Unemployment in the north has worsened as textile and other industries have collapsed in recent years. Shari'a law in twelve of the northern states has delivered few gains, both with respect to local order and economic growth. There is a widespread sense of northern disenfranchisement that has advantaged southern non-Muslim interests. Human and material traffic is relatively unimpeded between northern Nigeria (via Chad) and Saudi Arabia, Yemen and Sudan.

Criminal enterprises, extensive and sophisticated, figure prominently in the region—and should be a critical concern of US policy.

Organized crime syndicates operate a major crude theft operation from the Niger Delta in Nigeria, with alleged partners in regional refineries. They are backed by well-armed and increasingly well-financed militias that, growing ever larger and more coherent, begin to operate with greater autonomy, destructively shaping host country politics and fueling adventurism and regional conflict. Such a pattern has already been seen in Colombia.

Armed militias have exploited ethnic and economic division in the Delta states by using a legitimate political banner as a cover for running these criminal enterprises. Estimates of the scope of this theft, often misnamed illegal bunkering, range from 70,000[5] to 300,000 barrels per day.[6] At current prices 50,000 barrels per day of crude oil would generate over $1.5 billion per year. These are ample monies to fund arms trafficking, political corruption, or both.

The future of Nigeria's oil development is offshore, potentially providing considerable insulation from onshore unrest. Platforms are so far located a considerable distance from shore, making casual attacks by unsophisticated pirates or bandits more difficult. But rising revenues will also bring rising expectations, and an expansive energy offshore infrastructure could become an increasingly attractive criminal target.

Based on reports from government officials, oil companies and analysts, the theft of crude appears to take place by a decentralized, but clearly organized system. Taps have been found on pipelines operating between wells and flow stations in Nigeria's far flung pipeline system. Oil is captured on barges and trucks, which in turn load their cargoes on to larger barges, which then float down one of two primary river systems to meet up with offshore tankers. While many parties could conceivably steal some quantities of crude and sell to intermediaries, the procurement of larger barges and their onward connection with tankers at sea implies high-level coordination. Any reform will require aggressive action by institutions responsible for the policing and supervision or rivers and maritime

[5] All Africa 1 December 2004 quoting Mr. Basil Omiyi, Managing Director of Shell Petroleum Development Company
[6] Reuters in a 31 July 2003 article quoting Delta state governor James Ibori

areas: the Nigerian Navy, port authorities, tanker owners, and senior Nigerian government officials.

Competition for Influence in the Gulf in the Gulf of Guinea. Competition for influence with the region's leaders can be a serious obstacle to a reform agenda. Historically, the major external influences have been the United States, Britain, and France, who have impacted regional leaders through a combination of historical ties, commercial investment, and aid. Today, with the rise of China and India as major markets for crude oil, natural gas and products, and the expansion of national oil companies from China, Brazil, Malaysia and India into overseas investment, the strategic context in Africa has changed, becoming far more intensely competitive.

China's presence in Africa is significant, and strategic, but not new. Its role as an investor can be a welcome development, though its competitive impact in Africa on retailers and manufacturers has become controversial. Its competition at present with Western oil companies does not necessarily have a negative impact on global energy security, beyond temporary supply dislocations. China's political agenda so far does run contrary to many US objectives, with the notable examples of Sudan and Zimbabwe. In certain instances, China has shown it is capable of being quite agile in leveraging its influence through multiple initiatives (in investment, security, and political allegiances).

China's presence in Africa, however, is longstanding. China's dramatically expanded engagement in Africa today builds on fifty years of diplomatic involvement, grounded on support for African national liberation movements and its historical goal to prevail against Taiwan for recognition as one China. China's increased level of diplomatic activity is driven by its transformation from energy self-sufficiency to the world's second largest importer of oil. China's energy security strategy, reminiscent of the West prior to the 1973 Arab oil embargo, is to try to lock up international supply by direct investment (Sudan), by offering loans or aid to countries in exchange for supply (Angola), by partnering with Western companies (with BP in Angola) and most recently by attempted acquisition of existing energy companies (The China National Offshore Oil Corporation's June 2005 bid for Unocal). China's increased role is observable through the increase in the number of diplomats in Africa, increased bilateral dialogues with Nigeria, Gabon, and Equatorial Guinea, and its increased participation in UN Peacekeeping Operations (China now participates in six operations, with 600 peacekeepers in Liberia).

China's rising presence is strategic. As a global power it has access to any leader in the region and it has been effective in building solidarity with African leaders admiring of China's development achievements and rising global political sway. African leaders can now turn to the East for financial and political support, and to a lesser extent, for investment. China's investment in Sudan has limited the ability of the UN Security Council to utilize Chapter VII sanctions to address conflict in Darfur.

Chinese competition for exploration blocks in Africa is not expected to have serious negative impact on the global market, at least over the near term. Africa's major new exploration potential is offshore and the Chinese lack the deep water technology to

develop it. The real risk to US interests is political, namely that US interest in promoting political and economic reform will be undermined by Chinese competition for influence.

Conclusions. The US government, other governments, and international financial institutions can best enhance global energy security by fostering Africa's political development and social stability. The building blocks for these efforts are not complicated: higher diplomatic attention, collaboration among the United States, Europe and now India and China, a focus on improved governance, a creative approach to improving the capacity of host governments to manage their own affairs, improvement of security capability but only when closely tied to a press that fosters respect for human rights. Any strategy requires money, patience and sustained attention, a combination the United States and its partners have reliably failed to muster.